

## ABSTRACT OF THE DISCLOSURE

A protectant mixture for use in preserving biological materials comprising (1) at least one polyhydroxy compound, where the total amount of polyhydroxy compound in the mixture is from about 5% to about 60% by weight of the mixture where the mixture is an aqueous solution and is from about 10% to about 95% where the mixture is in solid form, and (2) phosphate ions, where the total amount of phosphate ions in the mixture is such that the molar ratio of phosphate ions to hydroxy groups in the polyhydroxy compound is from about 0.025 to about 0.625; a preservation medium comprising (1) a biological material, (2) at least one polyhydroxy compound, where the total amount of polyhydroxy compound in the medium is from about 5% to about 60% by weight of the medium, and (3) phosphate ions, where the total amount of phosphate ions in the mixture is such that the molar ratio of phosphate ions to hydroxy groups in the polyhydroxy compound is from about 0.025 to about 0.625; methods of preserving the preservation medium; and the resulting preserved biological material composition.